

CLAIMS

1. Cosmetic composition comprising an aqueous phase, said aqueous phase comprising at least one compound with an optical effect and a polymer comprising water-soluble units and units having in water a lower critical solution temperature LCST, the heat-induced demixing temperature in aqueous solution of said units with an LCST being from 5 to 40°C for a concentration by mass in water of from 1% to 25% of said units.

2. Cosmetic composition according to Claim 1, in which the heat-induced demixing temperature in aqueous solution of the units with an LCST of the polymer is from 10 to 35°C for a concentration by mass in water of from 1% to 25% of said units.

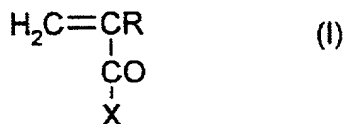
3. Cosmetic composition according to Claim 1, in which the polymer is in the form of a block polymer comprising blocks consisting of water-soluble units alternating with blocks consisting of units with an LCST; or in the form of a grafted polymer whose backbone is formed from water-soluble units, said backbone bearing grafts consisting of units with an LCST; said polymers possibly being partially crosslinked.

4. Cosmetic composition according to any one of the preceding claims, in which the water-soluble units are totally or partially obtainable by polymerization or by polycondensation, or alternatively consist totally or partially of natural polymers or modified natural polymers.

5. Cosmetic composition according to Claim 4, in which the water-soluble units are totally or partially obtainable by polymerization, especially free-radical polymerization, of at least one monomer chosen from the following monomers:

- (meth)acrylic acid;

- vinyl monomers of formula (I) below:



in which:

- 5           - R is chosen from H, -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub> or -C<sub>3</sub>H<sub>7</sub> ; and  
          - X is chosen from:  
          - alkyl oxides of -OR' type in which R' is a  
linear or branched, saturated or unsaturated  
hydrocarbon-based radical containing from 1 to 6 carbon  
10 atoms, optionally substituted with at least one halogen  
atom (iodine, bromine, chlorine or fluorine); a  
sulphonic (-SO<sub>3</sub><sup>-</sup>), sulphate (-SO<sub>4</sub><sup>-</sup>), phosphate (-PO<sub>4</sub>H<sub>2</sub>);  
hydroxyl (-OH); primary amine (-NH<sub>2</sub>); secondary amine  
(-NHR<sub>1</sub>), tertiary amine (-NR<sub>1</sub>R<sub>2</sub>) or quaternary amine (-  
15 N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) group with R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> being, independently  
of each other, a linear or branched, saturated or  
unsaturated hydrocarbon-based radical containing 1 to 6  
carbon atoms, with the proviso that the sum of the  
carbon atoms of R' + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 7; and  
20           - -NH<sub>2</sub>, -NHR<sub>4</sub> and -NR<sub>4</sub>R<sub>5</sub> groups in which R<sub>4</sub> and  
R<sub>5</sub> are, independently of each other, linear or  
branched, saturated or unsaturated hydrocarbon-based  
radicals containing 1 to 6 carbon atoms, with the  
proviso that the total number of carbon atoms of R<sub>4</sub> + R<sub>5</sub>  
25 does not exceed 7, the said R<sub>4</sub> and R<sub>5</sub> optionally being  
substituted with a halogen atom (iodine, bromine,  
chlorine or fluorine); a hydroxyl (-OH); sulphonic  
(-SO<sub>3</sub><sup>-</sup>); sulphate (-SO<sub>4</sub><sup>-</sup>); phosphate (-PO<sub>4</sub>H<sub>2</sub>); primary  
amine (-NH<sub>2</sub>); secondary amine (-NHR<sub>1</sub>), tertiary amine  
30 (-NR<sub>1</sub>R<sub>2</sub>) and/or quaternary amine (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) group with  
R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> being, independently of each other, a  
linear or branched, saturated or unsaturated  
hydrocarbon-based radical containing 1 to 6 carbon  
atoms, with the proviso that the sum of the carbon  
35 atoms of R<sub>4</sub> + R<sub>5</sub> + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 7;

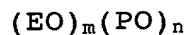
- maleic anhydride;
- itaconic acid;
- vinyl alcohol of formula  $\text{CH}_2=\text{CHOH}$ ;
- vinyl acetate of formula  $\text{CH}_2=\text{CH}-\text{OCOCH}_3$ ;
- 5       - N-vinyllactams such as N-vinylpyrrolidone,  
N-vinylcaprolactam and N-butyrolactam;
- vinyl ethers of formula  $\text{CH}_2=\text{CHOR}_6$  in which  $\text{R}_6$   
is a linear or branched, saturated or unsaturated  
hydrocarbon-based radical containing from 1 to 6 carbon  
10       atoms;
- water-soluble styrene derivatives, especially  
styrene sulphonate;
- dimethyldiallylammonium chloride; and
- vinylacetamide.
- 15       6.       Cosmetic composition according to Claim 4, in  
which the water-soluble units of the polymer consist  
totally or partially of polycondensates or of natural  
polymers or modified natural polymers chosen from one  
or more of the following components:
- 20               - water-soluble polyurethanes;
- xanthan gum;
- alginates and derivatives thereof such as  
propylene glycol alginate;
- cellulose derivatives and especially  
25       carboxymethylcellulose,               hydroxypropylcellulose,  
hydroxyethylcellulose and quaternized hydroxyethyl-  
cellulose;
- galactomannans and derivatives thereof, such  
as Konjac gum, guar gum, hydroxypropylguar,  
30       hydroxypropylguar modified with sodium methyl-  
carboxylate groups, and hydroxypropyltrimethylammonium  
guar chloride; and
- polyethyleneimine.
- 7.       Cosmetic composition according to either of  
35       Claims 5 and 6, in which the water-soluble units of the  
polymer have a molar mass ranging from 1000 g/mol to  
5 000 000 g/mol when they constitute the water-soluble

backbone of a grafted polymer, or a molar mass ranging from 500 g/mol to 100 000 g/mol when they constitute a block of a multiblock polymer.

8. Cosmetic composition according to any one of  
5 Claims 1 to 7, in which the units with an LCST of the polymer consist of one or more polymers chosen from the following polymers:

- polyethers such as polyethylene oxide (PEO), polypropylene oxide (PPO) or random copolymers of  
10 ethylene oxide (EO) and of propylene oxide (PO);
- polyvinyl methyl ethers;
- polymeric and copolymeric N-substituted acrylamide derivatives containing units with an LCST; and
- 15 - polyvinylcaprolactam and vinylcaprolactam copolymers.

9. Cosmetic composition according to any one of Claims 1 to 8, in which the units with an LCST of the polymer consist of polypropylene oxide (PPO)<sub>n</sub> where n  
20 is an integer from 10 to 50, or of random copolymers of ethylene oxide (EO) and of propylene oxide (PO), represented by the formula:



25 in which m is an integer ranging from 1 to 40 and preferably from 2 to 20, and n is an integer ranging from 10 to 60 and preferably from 20 to 50.

10. Cosmetic composition according to Claim 9, in  
30 which the molar mass of the units with an LCST of the polymer is from 500 to 5300 g/mol, preferably from 1500 to 4000 g/mol.

11. Cosmetic composition according to Claim 10, in  
35 which the units with an LCST of the polymer consist of a polymeric or copolymeric N-substituted acrylamide derivative containing units with an LCST.

12. Cosmetic composition according to Claim 11, in which the units with an LCST of the polymer consist of a polymer chosen from poly-N-isopropylacrylamide, poly-N-ethylacrylamide and copolymers of N-isopropylacrylamide or of N-ethylacrylamide and of a vinyl monomer chosen from the monomers having the formula (I) given in Claim 5, maleic anhydride, itaconic acid, vinylpyrrolidone, styrene and its derivatives, dimethyldiallylammonium chloride, vinylacetamide, vinyl alcohol, vinyl acetate, vinyl ethers and vinyl acetate derivatives.
13. Cosmetic composition according to Claim 11 or 12, in which the molar mass of the units with an LCST of the polymer is from 1000 g/mol to 500 000 g/mol and preferably from 2000 to 50 000 g/mol.
14. Cosmetic composition according to any one of Claims 1 to 8, in which the units with an LCST of the polymer consist of a polyvinylcaprolactam or a copolymer of vinylcaprolactam and of a vinyl monomer chosen from the monomers corresponding to formula (I) given in Claim 5, maleic anhydride, itaconic acid, vinylpyrrolidone, styrene and its derivatives, dimethyldiallylammonium chloride, vinylacetamide, vinyl alcohol, vinyl acetate, vinyl ethers and vinyl acetate derivatives.
15. Cosmetic composition according to Claim 14, in which the molar mass of the units with an LCST is from 1000 to 500 000 g/mol and preferably from 2000 to 50 000 g/mol.
16. Cosmetic composition according to any one of Claims 1 to 15, in which the proportion by mass of the units with an LCST of the polymer is from 5 to 70%, preferably from 20 to 65% and better still from 30 to 60% relative to the polymer.
17. Cosmetic composition according to any one of Claims 1 to 16, in which the concentration by mass of

polymer in the aqueous phase is from 0.1 to 20% and preferably from 0.5 to 10%.

18. Cosmetic composition according to any one of the preceding claims, in which the compound with an optical effect is chosen from fillers, pigments, nacres, tensioning agents and matt-effect polymers, and mixtures thereof.

19. Cosmetic composition according to any one of Claims 1 to 18, which is a dispersion.

20. Cosmetic composition according to any one of Claims 1 to 18, which is an oil-in-water emulsion comprising, in addition to the aqueous phase, an oily phase dispersed in the aqueous phase.

21. Cosmetic composition according to Claim 20, in which the aqueous phase also optionally comprises an emulsifying surfactant.

22. Cosmetic composition according to any one of Claims 1 to 21, in which the aqueous phase also optionally comprises a gelling agent in a concentration of from 0.01 to 5% by weight relative to the total weight of the composition.

23. Cosmetic composition according to any one of Claims 1 to 22, in which the aqueous phase consists of a physiologically acceptable medium.

24. Cosmetic composition according to any one of Claims 1 to 23, which is in the form of a cosmetic, make-up or care composition that may be applied to the skin, including the scalp, the nails, the hair, the eyelashes, the eyebrows, the eyes, mucous membranes and semi-mucous membranes, and any other area of body or facial skin.

25. Composition according to any one of Claims 1 to 24, which is chosen from foundations, face powders, eyeshadows, mascaras, products providing coverage or "soft focus", antisen products and hair products.

26. Use of the polymer as described in Claim 1, to eliminate or reduce the tack of a film or deposit

obtained from a composition with an optical effect containing the said polymer.

27. Use of the polymer as described according to Claim 1, to maintain the staying power of a film or deposit obtained from a composition with an optical effect containing the said polymer.

28. Use according to Claim 25 or 26, in which the said film or deposit is exposed to a hot and/or humid atmosphere.

29. Use according to Claim 27, in which the relative humidity (RH) of the said atmosphere is from 40 to 95%.

30. Use according to Claim 27 or 28, in which the temperature of the said atmosphere is from 25 to 45°C.

31. Cosmetic use of the composition according to any one of Claims 1 to 25, to fade out imperfections in the skin relief and/or to conceal the microreliefs, wrinkles, fine lines and/or pores of the skin.

32. Cosmetic use of the composition according to any one of Claims 1 to 25, for making up the skin, the eyelashes, the lips and/or the hair.

33. Cosmetic process for treating the skin, which is intended to give it a matt appearance and/or to conceal the defects in the skin relief, characterized in that the composition according to any one of Claims 1 to 25 is applied to the skin.